



State of Nevada – Department Of Personnel

CLASS SPECIFICATION

| <u>TITLE</u> | <u>GRADE</u> | <u>EEO-4</u> | <u>CODE</u> |
|-----------------------|--------------|--------------|-------------|
| COMBINATION WELDER II | 31 | G | 9.430 |
| COMBINATION WELDER I | 30 | G | 9.417 |

SERIES CONCEPT

Incumbents in this class plan and layout projects and join metal components together using gas welding, arc welding, soldering and brazing processes in order to fabricate, strengthen and/or repair a wide variety of components, equipment, and fixtures such as office furniture, athletic equipment, heating and air conditioning units, duct work, pipelines, and highway equipment.

Working from blueprints and/or through examination of the component equipment or fixture, determines the appropriate type of material based upon knowledge of the properties and characteristics of metals and materials and the intended use of the object; develops a sketch if a piece must be fabricated; determines appropriate quantity of material to minimize waste; completes work order, cost estimate, and orders materials; designs, cuts and lays out template to ensure a proper fit.

Lays out and fits material in preparation for welding by: measuring, making, and scribing dimensions and reference points on the material; detailing location and sequence of procedures; sawing, shearing, or cutting material; marking and drilling or punching holes; positioning, aligning, and fitting components.

Sets up for the job according to the type of work performed by: dismantling and straightening components if required; selecting the appropriate welding process; determining the appropriate welding torch/machine; setting up the torch/machine including adjusting pressures, mixtures, polarity and temperatures; securing and tacking material in place for final welding.

Welds metal components together using a variety of gas and arc welding processes including acetylene, AC/DC arc (stick), gas-tungsten-arc (TIG), gas-metal-arc (MIG), and innershield (flux core wire) welding and thorough application of knowledge of metallurgy and the various welding techniques. Manually guides equipment along weld line while observing and making the required adjustments; examines weld for quality and conformance with specifications. Reassembles components and equipment after completion of repair. Welding is performed in flat, horizontal, vertical and overhead positions.

May operate various machine tools such as a lathe, drill press, grinder, band saw, or mechanic's hand tools to complete general repair work.

CLASS CONCEPTS

COMBINATION WELDER II

Under general supervision, performs complex skilled welding work the preponderance of the time and/or functions as a lead work supervisor the preponderance of the time on a regular and reoccurring basis to lower level welders, journey level skilled trade workers, or a regularly assigned crew of inmates. Lead work supervision includes providing training and technical assistance, work

CLASS CONCEPTS (cont.)

assignment and work review, and providing input to performance evaluations. In a prison environment, inmate performance is documented through completion of periodic progress reports and incumbents are responsible for implementing security procedures which includes securing the work area from unauthorized inmates and accountability for assigned inmates, staff, tools, and equipment. Supervision of a crew of inmates must be within the institution and must be a regular and reoccurring duty of the position to warrant allocation to this class.

Examples of duties performed by incumbents at this level include: welding boilers and steam lines; providing design assistance and fabricating specialized research equipment or special use highway equipment.

Positions at this level are distinguished from the lower level of the series by the 1) lead work supervisory responsibility over other welders and skilled trade workers or 2) the complex welding work performed which requires a greater degree of ingenuity and original problem solving required to perform more complex modification and fabrication work; and the degree of skill required in specialized welding techniques.

This is the advanced journey level class in the series.

COMBINATION WELDER I

Under general supervision, incumbents perform the range of duties described in the series concept and may provide lead work supervision to lower level staff such as Maintenance Repair Workers. This is the journey level class in the series.

At this level incumbents primarily perform maintenance and preventative welding on a wide variety of equipment and fixtures. Examples include repairing tractors, forklifts, desks, and athletic equipment. In addition, incumbents fabricate items such as trailers, storage sheds, and duct work for air conditioning systems and perform basic equipment modification work.

MINIMUM QUALIFICATIONS

COMBINATION WELDER II

EDUCATION AND EXPERIENCE:

I

Two years of journey level welding experience equivalent to a Combination Welder I in Nevada State service, plus 30 semester credits with an emphasis in welding and machine work; OR

II

An equivalent amount of education and experience that provided the applicant with the required entry level knowledge, skills and abilities. One year of journey level experience may be substituted for 30 semester credits with an emphasis in welding and machine work.

LICENSE: An ASME or AWS all-position welding certification may be required for some positions.

SPECIAL NOTE: Some positions may require that applicants furnish their own tools.

MINIMUM QUALIFICATIONS (cont.)

FULL PERFORMANCE KNOWLEDGE, SKILLS AND ABILITIES: (These may be acquired on the job and/or needed to perform the work assigned.)

Thorough knowledge of the methods, procedures, tools and equipment used in AC/DC arc, TIG, MIG, innershield, air arc and acetylene welding.

Ability to train, motivate and supervise staff including assigning and reviewing work, establishing work schedules and priorities and evaluating performance.

ENTRY LEVEL KNOWLEDGE, SKILLS AND ABILITIES: (Applicants will be screened for possession of these through written, oral, performance or other evaluation procedures.)

General knowledge of mechanical theory and design. Working knowledge of the weldability, ductability and the effect that welding, heating, tempering, cooling, cool forming, wear and stress have on the various materials used in welding.

Ability to recognize steel, stainless steel, high carbon steel, manganese, copper, brass, aluminum and the different families of cast iron. Ability to establish and maintain effective working relationships with vendors and other sources of technical information.

Skill in welding in flat, horizontal, vertical and overhead positions. Skill and innovativeness in designing new installations and modifying equipment for new and different functions.

In addition, all knowledge, skills and abilities required at the lower level of the series.

COMBINATION WELDER I

EDUCATION AND EXPERIENCE:

I

Three years of skilled arc and gas welding experience under the supervision of a journey level welder (such as an apprenticeship) plus 30 semester credits with an emphasis in welding and machine work; OR

II

Successful completion of the Craft-Worker-In-Training program in Nevada State service; OR

III

Completion of a recognized welding apprenticeship program; OR

IV

An equivalent amount of education and experience that provided the applicant with the required entry level knowledge, skills and abilities. One year of journey level experience may be substituted for 30 semester credits in welding and machine work.

LICENSE: An ASME or AWS all-position welding certification may be required for some positions.

SPECIAL NOTE: Some positions may require that applicants furnish their own tools.

MINIMUM QUALIFICATIONS (cont.)

FULL PERFORMANCE KNOWLEDGE, SKILLS AND ABILITIES: (These may be acquired on the job and/or needed to perform the work assigned.)

Working knowledge of agency and division rules, policies and procedures.

Ability to read and interpret engineering drawings and hydraulic and electrical schematics.

Skill in safely operating the tools and equipment used in basic machine work.

ENTRY LEVEL KNOWLEDGE, SKILLS AND ABILITIES: (Applicants will be screened for possession of these through written, oral, performance or other evaluation procedures.)

Working knowledge of the methods, procedures, tools, and equipment used in AC/DC arc, TIG, MIG, innershield, air arc and acetylene welding. Working knowledge of the composition, properties and characteristics of different ferrous metals, nonferrous metals and alloys, fluxes and other materials used in welding. Working knowledge of algebra, geometry and trigonometry sufficient to layout and design patterns, templates and jigs. Working knowledge of safe working procedures and the proper use, storage and disposal of hazardous materials.

Ability to write sufficient to complete work orders, supply requisitions, and document specifications. Ability to read sufficient to read and interpret welding and metallurgy manuals. Ability to read and interpret blueprints and welding symbols. Ability to work independently and follow through on assignments with minimal direction. Ability to inspect an assignment and determine the best welding or repair procedure. Ability to establish and maintain cooperative working relationships with co-workers, agency staff, and vendors.

Skill in safely operating and maintaining the tools and equipment used in welding. Skill in AC/DC arc, TIG, MIG, innershield, and acetylene welding, brazing, and soldering. Skill in straightening and shaping metal.

This class specification is used for classification, recruitment and examination purposes. It is not to be considered a substitute for work performance standards for positions assigned to this class.

ESTABLISHED: 9.430
7/1/91P
11/29/90PC

9.417
7/1/67

7/1/91P
11/29/90PC